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Mayflower Pipeline Incident Response

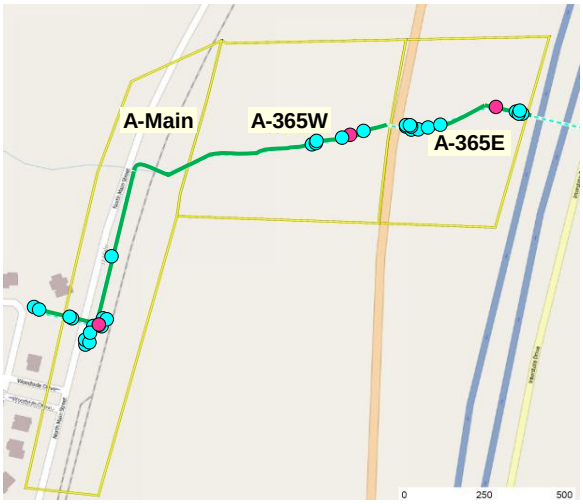
Mayflower, Arkansas

Sheen Monitoring Report #15

Monitoring Period: Daily from 01/27/2014 through 02/02/2014

Mitigation: Suspected petrogenic sheens were removed using absorbent materials.

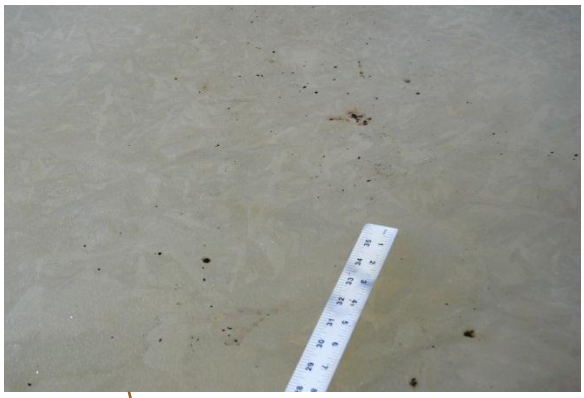
Legend:
Green Line – No Sheen
Aqua Circle – Brittle Sheen Location
Pink Circle – Non-Brittle Sheen Location



Drainage Ways (Summary of Observations from 01/27/2014 through 02/02/2014)

Observations in Drainage Ways:

- A-Main
  - Five covers (no particular structure) of silver gray sheens; five covers, one cover/patch/streamer, and one streamer of metallic/silver gray sheens; one cover and one patch of metallic/rainbow sheens; and one cover of metallic sheens observed. Sheens broke apart when disturbed ("brittle")[1].
  - One patch/cover (no particular structure) of metallic/silver gray sheens observed. Sheens did not break when disturbed ("non-brittle")[2].
- A-365W
  - One cover (no particular structure) brittle[1] silver gray sheens and four covers (no particular structure) of brittle[1] metallic/silver gray sheens observed.
  - One patch/streamer of non-brittle[2] metallic/silver gray sheens observed.
- A-365E
  - Three covers (no particular structure) of brittle[1] silver gray sheens; six covers of brittle[1] metallic/silver gray sheens; one cover/patch and two covers of brittle[1] metallic sheens; and one cover of brittle[1] metallic/rainbow sheens observed.
  - One patch/streamer of non-brittle[2] metallic/rainbow sheens observed.



Very Dark Brown Sheen Spots Observation on 01/29/2014

Dawson Cove Inlet Channel (Summary of Observations from 01/27/2014 through 02/02/2014)

Observations in Dawson Cove Inlet Channel:

- One patch/cover (no particular structure) and four covers of brittle[1] metallic/silver gray sheens; three covers of brittle[1] silver gray sheens; spots of brittle[1] very dark brown sheens; one streamer of brittle[1] metallic sheens; two covers of brittle[1] metallic/rainbow sheens; and one cover of brittle[1] rainbow/silver gray sheens observed.
- Three patches and one streamer of non-brittle[2] metallic/silver gray sheens; one patch of non-brittle[2] metallic sheens; and one patch of non-brittle[2] metallic/rainbow sheens observed.

Notes:
1. Brittle sheens are often of natural biogenic origin.
2. Non-brittle sheens are often related to anthropogenic sources, including petrogenic sources (e.g., petroleum hydrocarbons).
3. Laboratory testing is required to distinguish sheen sources (e.g., crude oil, roadway runoff, natural biologic activity).
4. Sheen color (dark/metallic/rainbow/silver gray) and structure (patches/streamers/cover) terminology reference: NOAA 2007. NOAA Open Water Oil Identification Job Aid.

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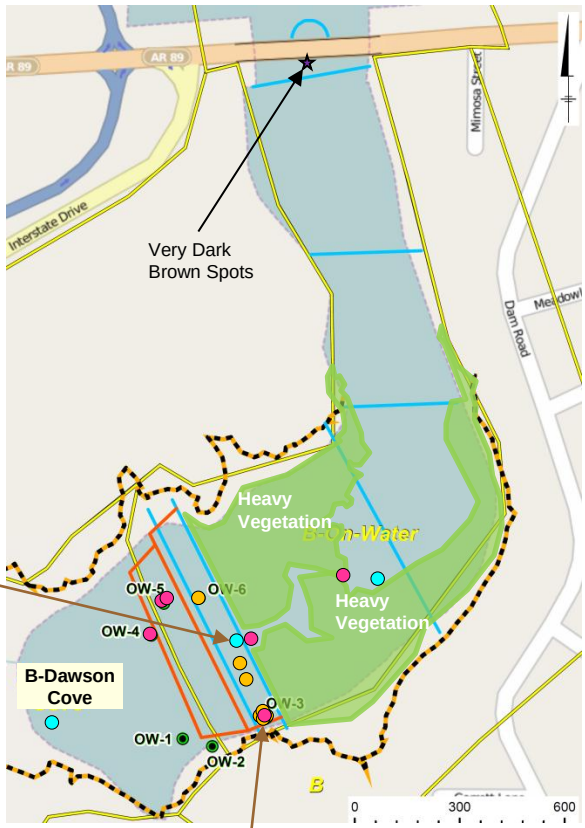
Sheen Monitoring Report #15 (continued)

Monitoring Period: Daily from 01/27/2014 through 02/02/2014

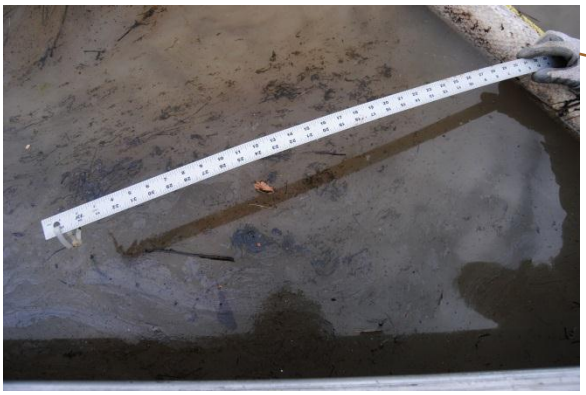
Observations in Dawson Cove:

- One cover (no particular structure) of brittle[1] very dark brown sheens; one patch and one cover of brittle[1] metallic/silver gray sheens observed.
- One patch/streamer (with 0.5-inch wide oil spots) and one patch (with 0.25-inch wide oil spot) of non-brittle[2] silver gray sheens; one patch and one streamer (with 0.1- to 0.5-inch wide oil spots) of non-brittle[2] metallic/silver gray sheens; and seven patches/streamers (four with 0.1- to 0.25-inch wide oil spots) and three streamers (one with 0.1- to 0.5-inch wide oil spots) of non-brittle[2] metallic/rainbow sheens observed.
- On January 29, very dark brown spots observed near Highway 89 and reported to the field crew. When the field crew arrived at that location, the spots were not observed and thus, not characterized.

Legend:
Aqua Circle – Brittle Sheen Location
Pink Circle – Non-Brittle Sheen Location
Orange Circle – Non-Brittle Sheen with Oil Spot Location
OW-1 – Shoreline Observation Location



Dawson Cove (Summary of Observations from 01/27/2014 through 02/02/2014)



Very Dark Brown Sheen Cover Observation on 02/01/2014

Metallic/Rainbow Sheen Patch/Streamer with Oil Spot (0.1- to 0.25-inch Wide) Observation on 01/31/2014

Path Forward for 02/03/2014 to 02/09/2014:

- Continue sheen monitoring in all areas.

Notes:
1. Brittle sheens are often of natural biogenic origin.
2. Non-brittle sheens are often related to anthropogenic sources, including petrogenic sources (e.g., petroleum hydrocarbons).
3. Laboratory testing is required to distinguish sheen sources (e.g., crude oil, roadway runoff, natural biologic activity).
4. Sheen color (dark/metallic/rainbow/silver gray) and structure (patches/streamers/cover) terminology reference: NOAA 2007. NOAA Open Water Oil Identification Job Aid.